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THE JOURNAL OF PHILOSOPHY

GEORGE STUART FULLERTON

IF I have been asked to write of Fullerton at this time, it is, of course, because as his pupil in the early 'nineties—and in the late, a young instructor under his tutelage and direction—I may be supposed to have kept memories of those days. That these should be affectionate, all who knew Fullerton would take for granted; that they would be willingly, if sadly, recalled at his asking the editor of this JOURNAL might well assume.

Only, the form in which these notes are here laid before the readers of the JOURNAL is not as untouched by chance and accident as I would willingly have had it; for it so happened that the moment at which they were asked for nearly coincided with the appearance in the Alumni Register (Pennsylvania) of what had been written in like sense and intention. No man can find "other words" for the same sincere feeling, however conscious that had he addressed his first to another company they must have taken other form. I can only hope, if I am to go on, that it will not be too distasteful to you to be forced to overhear (as it may seem) the echo of a voice speaking within its family-circle. But if here at the outset I reproduce this former note, it is not without a sense that the very qualities it owes to accident may serve better than any I might more thoughtfully have devised to lend light and color to what reflections I would offer the philosopher ere I close.

It was (I could well say to my fellow-alumni) out of darkness of mood and dimness of knowledge I chose to write of brighter things and closer ties.

What were the days, how golden the hours spent with the Fullerton of other years, men of those years will not have forgotten. In their hearts they carry an image which the sombre end of his story will make them hold the closer. The ultimate sadness of a thoughtful man leaves us all the most thoughtful. We wonder how much of the illumination he cast was at his own cost of lightness. We wonder, and are silent.

But of that illumination we are certain. It was a gay learning we learned of Fullerton, though it had to do with depths few teachers

dare sound. Cool analytic thinking, too conscientious with the thinker's conscience to shun the dangerous or avoid the dry, how should this not spoil the day for minds still warm and unformed, not yet thoughtful, of a courage untried? Such thinking might have taken the light out of our sky: if it did not, if on the contrary it so sunned things as to make its hour an hour to be waited for, must not Fullerton have owned some teacher's secret any teacher would sell his soul to share?

Aye, but that I fear is the only way any might come by Fullerton's secret of teaching; something like that I have come to think is the price at which he himself had it. How could we guess this wit playing about arid places to make them blossom for us, this humor lightening serious things, to be a costly purchase? Later, perhaps, having wandered along ways where thought and laughter were seldom met with together, we who remembered may have come to reflect. If elsewhere we found these qualities combined only in those who had been to school to pain, we who remembered may well have come to reflect.

"Conception of the infinite, and the solution of the mathematical antinomies: a study in psychological analysis." What a title, what a book to put in the hands of youngsters just out of their *Barbara celarent darii ferio*que *prioris!* And this but as preparation for a second work to follow: "A plain argument for God!" ("Plain," it may be; not conventional, surely.)

As for the former of these volumes, it was a delight. Rather was it a hard matter made delightful. But if such as are not of the fortunate 'nineties would know in what its wise humor lay, let me quote a few lines of the Preface. They may suggest why even more than Fullerton, the man, Fullerton, a manner of thinking, will remain with his students always.

> To be told that of two impossible things one must be true; that of the same two lines one may be looked upon as equal to, less than, or greater than the other; that Achilles, running rapidly, can never overtake the tortoise, moving slowly; to be told all this seriously is well calculated to bring not merely suspicion but contempt on speculative thought. Who has not puzzled, on his first introduction to Logic, over some of these antinomies, and been silenced unconvinced by the practical demonstration, leaving in the mind a disagreeable sense that the argument must be wrong somewhere, yet a consciousness that it seems perfectly sound.
>
> When the metaphysician proves to us that a rhinoceros is a mosquito, his chain of reasoning is rendered innocuous by the striking incongruity of the conclusion; but if we observe no flaw in the reasoning, we cannot help recognizing the perplexing truth that it is the experienced fact alone which has prevented assent, and that a precisely similar argument, *the conclusion of which cannot be similarly tested,* may yet induce assent, though equally erroneous.

If we have no better reason for rejecting an argument, *what can be our criterion when we leave the sphere of the immediately palpable?* [Condensed].

This is Fullerton in essence; no problem of inference can be dry for him nor for any who sit under him. Its topic may be remote from, its conclusion contradictory to all experience: it is none the less *a test of reasoning.* And as reason is all that can help us reach for what lies beyond our immediate grasp, to be able to catch its errors before the event convict it, is a faculty precious beyond whatever other learning. Only, Fullerton, the teacher, would never have wasted a moment preaching so sound a sermon in so many solemn words. Rather, before the end of that moment you would have found yourself chasing Achilles who was chasing the tortoise, and with perfect gayety of heart you would so have endured till you had caught, not the elusive tortoise, but the more elusive fallacy Zeno of Elea set rolling, over two thousand years ago. It is true, those who ran this course in the 'eighties and 'nineties may never again have found themselves called to overtake a tortoise: but of the many days gone since then, hardly one can have let them rest from the task of catching false reasons. Meanwhile, back in these 'eighties and 'nineties you had laughed much together, Fullerton and you; till somehow you had laughed yourself forever out of the solemn crowd for whom so many things are "all right in theory, but—." And that is already something.

"What can our criterion of reasoning be when we leave the sphere of the immediately palpable?" No one more ready than Fullerton to leave this sphere with you, so you would take reason for guide. The "Plain argument" records one of these excursions, and would you know (you later men who have fallen into the hands of less lovable lovers of wisdom)—would you know the outcome?

I have tried to make clear that the argument for God [so Fullerton writes in conclusion] is simply the natural argument for a mind revealed in the system of things.

Throughout I have insisted upon keeping in mind the analogy between the argument for God and the reasoning which convinces us of the existence of minds in other men. In the light of this analogy, objections to the argument from the reign of natural law, from the eternity of the world, and from the doctrine of evolution have been seen to be quite aside from the point at issue.

And it will be well to remember that we may very possibly get help in any new difficulties which may meet us in reflecting upon the idea of God, if we will adhere closely to this thought.

There is, so far as I can see, only one way in which the student of natural science may refute our argument for God. If he ever succeeds in proving that nature is irrational, and that things do not reveal mind, he will have answered the argument. Whatever else he may succeed in proving, unless he establish this, he leaves the argument untouched [Collected].

Fullerton, you see, was not always laughing. Was he ever, I wonder? Or was he, out of a heart knowing its own bitterness, dispensing a lightness it was his to give rather than keep? I wonder. But as though it were play we learned to think: and to think in the end, of—what? Of such things as I have said, and to think of these things with that highest reverence—the reverence of enquiring reason.

Of Fullerton's later years (after 1904) but faint echoes have reached me. This one followed his course at Columbia, that one found him at home in Munich, another heard him lecture at Vienna. All bring impressions: impressions of a brilliant mind, of a personality, of charm, of a humanity at once kind and—baffling. Too vague all this to set down beside our clearer memories. For others, Fullerton was always a distinguished man; with us, he was a tradition.

And now I would willingly hope these notes revealing the impressions left long ago by the personality of a thinker may not have spent all they have to offer, in paying tribute of old pupil and old friend to a cherished memory. He whom they recall belongs not only to his classes but through his writings to the public. Would it not be strange if the workman had so excluded his personality from his work that no new insight into his private being could help in the interpretation of his public utterance?

Yet what I would suggest in the way of such " help " must have a strangeness of its own. It is that Fullerton, more than any other I know of, tried to keep what was deepest in himself out of his expression: he tried to keep to himself the gropings of his soul.

There is, I venture to say, not a single fellow-alumnus having shared with me the " hours " just recalled who will not have heard the same " fault-found " with Fullerton, the teacher: " Never will he let us know the final answer, never trust us with *the end of his thought.*" There were those from whom this complaint came with a certain depth of disappointment; there were others for whom it was no more than an amused appreciation of an outwitting cleverness; there were a few perhaps who saw this " fault " as a shining merit. " Not to tell *what he* thinks, but *how one* thinks is the thinker's use to us," these would say. No doubt Fullerton would have accepted this last account of his motives; no doubt he would have offered himself no other.

If I have come to think there may have been a deeper reason for this reserve, perhaps another reminiscence will hint the way to it—a memory, this time, of Harvard days. There, Dean Everett (of Divinity) was known for one of those sweet-souled gentlemen

whose humor, too abundant to be repressed, was yet too cautiously kind to risk itself on any object but its author. When, then, this teacher (who like Fullerton was preacher, too) would enforce his precepts on the last touch to be given a homily, he would sometimes offer himself as sound example. "And when, gentlemen, [so his words were repeated to me] having of a Saturday carefully reread my Sunday discourse I could assure myself, here was nothing could hurt *any one*—then I knew there was no more to be done."

The reader will be good enough to recall the "Plain argument" as in a previous paragraph I brought it back to those who had shared undergraduate days with me. In those days, as ever after, Fullerton was fond of letting the convinced tones of Berkeley plead the " analogy " on which all depended:

> It is plain we do not see a *man*—if by *man* is meant that which moves, perceives, and thinks as we do—but only such a certain collection of ideas as directs us to think there is a distinct principle of thought and motion, like to ourselves, accompanying and represented by it. And after the same manner we see God; all the difference is that, whereas some one finite and narrow assemblage of ideas denotes a particular human mind, whithersoever we direct our view, we do at all times and in all places perceive manifest tokens of Divinity—everything we see, hear, feel or anywise perceive by sense, being a sign or effect of the power of God; as in our perception of those very motions which are produced by men [Pr. 148].

With no more than this the "plain argument" of our undergraduate day closed. But it is not to be supposed that at this point Fullerton's critical mind stopped thinking; no more *then* than a few years later when (in the *System of Metaphysics,* 1904) immediately following this passage from Berkeley comes the comment:

> But it must be admitted that the inference that there is a God rests upon an analogy much more remote than that on which we rest the inference that the minds of other men exist [601].

Nor can I conceive Fullerton himself to have derived any real comfort from a later reflection of this same work: after all, the inference to the Divine Mind may not appear so " much more remote " than the inference to fellow-minds, if we do but reflect *how little we have a right to know of these fellow-minds.*

> All of which means that we may make inferences touching minds without being able as yet to bring such inferences under the head of truths scientifically proved. The inference to the existence of God seems to be of the same nature. To many men—and not necessarily to the ignorant and the unreflective—the conviction that a Divine Mind is revealed in the world seems an irresistible one.
>
> [But] it is scarcely too much to say that if his experience of the world and the facts of his own life do not at least incline a man to recognize the analogy upon which the inference of God's existence rests, it is not likely that he will be convinced by reading.

> With those who do admit the analogy, I am glad to enroll myself.
>
> But [Fullerton characteristically adds] I think it important to recognize that the analogy is a remote one. One gains nothing by pretending to more information than one really has, or by confusing Faith with established knowledge [604, 5].

What shall we say? is this argument one that can address itself only *ad fidem intellectum quaerentem?* And in the "Faith" of the last line, has it found such a faith? At least it will have caught this faith in no unwary mood; it is Fullerton himself who but a few pages before had issued the warning:

> The *fides quaerens intellectum*, the faith that already has its conclusion, and is casting about for premises, is always in some danger of accepting premises uncritically [573].

"One gains nothing by pretending to more information than one really has" and yet, what *of* this "Faith" that will not "pretend" to reason?

We sometimes feel das unglücklichen, das insichentzweiten Bewusstsein of history to have had moments of a worried repose-of-exhaustion. Mr. Fausset (in his recent *Study in Discord*) recalls John Donne's animadversion on this motive of Faith:

> I begin to think that as litigious men tired with suits admit any arbitrament, and princes travailed with long and wasteful war descend to such conditions of peace as they are soon after ashamed to have enhanced, so philosophers, and so all sects of Christians, after long disputations and controversies, have allowed many things for dogmatical truths which are not worthy of that dignity; and so, many doctrines have grown into the ordinary diet and food of our spirits, . . . which were admitted but as physic in that present distemper, or accepted in a lazy weariness, when men, so they might have something to rely upon, and to excuse themselves from a more fanciful inquisition, never examined what that was [140].

But such moods, while they do befall all philosophers, and the religious consciousness of whatever sympathies, can endure only in the collective, the institutional mind of "sects" and communions. Donne himself was witness to the impermanency of the rest that rests on strife-weariness alone. The individual mind quickly recovers its critical spirit, and the more its faith is dear to it the more it torments itself anew. It can not long "excuse itself from a more fanciful inquisition"; it must sooner or later "examine what that physic was," or rather what "present distemper" cried for physic at all.

There are those who would find Fullerton, whatever his distemper had been, finally to have exorcized it with a word,—a word coming more and more frequently to his lips as his work grew in years. That word is "loyalty." "Traditions" come to voice for him no mere irrationalties of simpler times, but the best experience of

the ages. Traditions of patriotism, of respect for law—all that " established order of things "—become endowed for him with a certain sacredness by virtue of all the human travail gone into their making. A religion that had at one time been content with a "Plain argument," had then grown critical of this " reasoning," had for a moment appealed to a Faith outstripping reason, came in the end to advocate *faith in tradition.* Why? Because *this* faith could at least be argued? The original, the ever-returning demand for argued and reasoned faith doubtless persisted; but who recalling the critical intellect of Fullerton can suppose his spirit to have fed *itself* on such (aggressively sane but) unexamined proprieties of thought as the *Hand Book of Ethical Theory* (1922) offers to its undergraduate audience? Thus—

> A woman [we find it there written] may regret that her infant has red hair. She will not, on that account, as a rule, exchange him surreptitiously for another. Men do not commonly repudiate their fathers because they are not rich or are growing old. A good citizen may regret that his country has seen fit to enter into a given war, but he will not, therefore, give aid or comfort to the enemy.
>
> He who is capable of lightly repudiating his religion resembles the man who is capable of discarding his wife, when he sees the first grey hair. Those who do such things are apt to be men who fill their whole field of vision with their rights, and can find no place there for their duties. Nor should it be overlooked that the man who is capable of lightly discarding his wife, is the man as capable of supplying her place with a worse. Even so, he who easily throws off his religion is usually the man who easily replaces it with some superstition, scientific or merely whimsical, at which other men wonder [352 f.].
>
> I maintain that tradition and loyalty have their claims. They are not the only claims that can be made, but they are worthy of serious consideration. Man is man, whether he is dealing with things secular or things religious [360].

It is astonishing how as I read these lines there comes back to me the old feeling of the " end of the hour,"—of an hour that ended thirty-odd years ago. We had no words for it then—just a vague sense of something restless abroad; while a grave kindly voice seemed to laugh our uneasiness away. But if now, with the experience of a life-time behind him, one who recalled those " ends of the hour " were to seek words for his remembered mood, perhaps he would find some such as these: " 'All is questionable; but let us trust all is well with the world—and beyond.' This is what Fullerton would have *us* take abroad with us. But what does that questioning mind of his carry back to its own solitudes? "

There are times when hearing my colleagues complain of Fullerton's "inconclusiveness" I have seemed to catch the old student-spirit surviving in a mature word. And then I have wondered whether throughout the whole of this life there had not run a single

unavowed motive of reticence. Was he not essentially a pastor of the flock? Had he not sat so long at the feet of the Preacher that, like the gentle soul of my Harvard memory, he must always run a last anxious eye over his homily to make sure "there was nothing there could hurt"? And what if his fully expressed and most critical thought refused him this assurance? Then the "last word" must be deleted, must it not?

Where did this word-that-hurt, forbidden its proper place that others might not be hurt, find ultimate lodgment? In what martyrdom may not repression of the critical spirit end?

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THE NATURALISTIC THEORY OF PERCEPTION BY THE SENSES

IN its primary and unsophisticated use, sense-perception signifies observation and recognition of objects by means of bodily organs, eyes, ears, hands, nose, *etc.* As a term, it is like pen-writing, brush-painting, hammer-pounding, steel-engraving. It tells nothing about the nature of perceiving, but conveys information about the means by which the act of perceiving occurs, just as the other phrases specify tools through which acts take place. However, in each case the act and its characteristic consequences are modified by special traits of the organs and means which are involved. Thus questions arise: In what way do the employed instrumentalities affect the act and thereby its results? In carrying on such inquiries, investigators are led to discoveries far outside the scope of the first questions. In connection with acts performed by the use of tools, not only are their specific effects learned, but principles of friction, mechanical equivalents of heat, the correlation of energies are ascertained. Similarly, in connection with the use of the eyes, ears, *etc.*, in the act of perceiving, not only are the particular functions of different organic structures learned, but such things as the effects of color blindness, astigmatism, of muscular adjustments, of refraction by the lens, and in general the participation of nerve-elements with external physical changes in bringing about the occurrence of certain perceived qualities. But all this concerns the things perceived. It does not affect the act of perceiving. Hence such problems as present themselves are of the same order as those hit upon in any naturalistic inquiry. They do not concern the nature of perception, awareness, or knowledge. There is nothing peculiar, nothing unique about them.

The adjectives "sense" and "sensory" are prefixed to qualities

as well as to the act of perceiving. Colors, sounds, odors, rough, smooth, *etc.*, are named "sense-qualities." Here the term "sense" is prefixed by a figure of speech. The qualities themselves are not sensory; "sensory" designates an important condition of their occurrence, not a constituent in their nature. By precisely a similar usage of speech, a house, factory, barn is called a building, meaning that which is the outcome of the operation of building; no one is misled by the word into transferring the properties of the act of building into the house or factory. So a picture is named a painting or an oil-color or a water-color. In each case the name is given because of the consequences of the means of its occurrence upon the object produced, yet its traits, uses, and career when produced are independent of the act of generation. We might also call "sense" qualities vibration qualities, or cerebral qualities, or by the name of any other factor which conditions their occurrence. In short, perception does not affect or infect the nature of the qualities perceived, although sense-*organs* and their structural connections, which are the means of perceiving, do affect the properties of the thing produced. But this is nothing unique or peculiar about this fact. The same thing happens in any natural sequence when traits of a consequence are correlated with traits of interacting antecedents.

The significance of the point of view thus briefly indicated lies in its contrast with the epistemological theory of sense-perception; in contrast with that theory, the one set forth may be termed naturalistic. By the epistemological theory, sense-perception means a unique kind of perception, and sense quality means a kind of quality so distinctive that it may be called psychical or mental. Upon the naturalistic theory, perception is one and the same, and prefixed adjectives, like sensory, refer to its means or organs; the difference between an object perceived by means of the senses and an object recalled by means of some other organic structure is comparable to the difference between any two concrete things, say between a cat and dog, land and water. The difference is in one factual subject-matter, "sense-presentation" having for its subject-matter a thing in some *present* space-relation, memory-presentation that thing in a specified past temporal relation. But upon the other theory, perception is made unique and heterogeneous because of its "sense" nature, and hence the objects of the two modes of presentation are so different in kind that a problem is constituted. And the same thing occurs in the case of contrast of things presented as "conceptual" (or reflectively determined) objects in distinction from "sense" objects. In one theory the difference between colors and, say, electro-magnetic disturbances is a difference in specified facts in one and the same world of

objects, comparable again to the difference between land and water as objects of perception; on the other theory, there is a gulf in kind between them, and we have to decide which is "the reality," or else find some method of "reconciling" the reality of the one kind of object with that of the other kind of object.

There is, therefore, a question of fact behind the epistemological question. Until this question of fact has been decided the epistemological problem may possibly be a wholly artificial question due to assuming as a fact something which is not a fact. Is the prefixing of "sense" or "sensory" to "perception" metaphorical, transferring by an intrinsically harmless and common figure of speech traits of the tools and effects of an act to the act itself? Is it properly analogous to water-color painting and oil-painting, to etching and engraving, as names for pictures?[1] Or does it properly denote a distinctive and unique kind of presentation, "sensory" affecting and qualifying throughout the intrinsic nature of the being aware, and thereby determining that of which we are aware to be a distinctive and unique kind of thing?

This question is primarily, as indicated, a question of fact. The factual reasons assigned for taking the second alternative have to do with various "abnormalities" in connection with perception by means of sense-organs. There is an almost endless list of such occurrences so that only a few samples need be given. They are such affairs as double images when the object remains one; the changes which take place in an image while the object remains unaltered—as seeing a thing dance when the eye-ball is pushed; a stick seemingly bent in water; the change in the visual form of things seen in different perspectives and angles; the change in apparent pitch of sound with velocity of approach or removal; converging railway tracks, *etc.*, to say nothing of outright illusions. In the words of a contemporary epistemological writer: "The point is, that all these cases can easily be described in terms of actual and potential *sensations*, while a description in terms of *objects* leads to grave difficulties."[2] The contrast drawn by the italicized words, "sensations" and "objects,"

[1] The implication of the question is not that reference to mode of production is an illegitimate way of distinguishing different specific qualities from one another. The nature of the difference between an engraving and an etching, a wood-engraving and a steel-engraving, may be more exactly and surely determined if we know the different ways in which they are produced. But this is an *added* knowledge about pictures; it does not create a problem as to the nature of pictorial representation *ueberhaupt*. Similarly the effect of sensory and other organic conditions upon the particular things which we perceive does not create a problem as to the nature of perception as such.

[2] Durant Drake, in an article entitled *"What Kind of Realism?"* in this JOURNAL, Vol. IX, p. 150, italics mine.

is equivalent to the difference between statements in terms of specified subject-matters on one hand, and a unique peculiarity of perception on the other, "sensations" meaning, as here used, a peculiar kind of existence called psychical.

Discussion of facts is, however, bound up with difficulties arising from implications of terminology and from diverse theories inherited from previous philosophizing. This paper is given to an effort to clear away some of the underbrush which obscures vision.

In the first place, traditional ideas have had an effect through language which persisted after the beliefs that had given it significance and pertinence had disappeared. "Sense qualities" is, historically, a survival of *sensible* qualities: but while "sense" prefixed to qualities has no import save that of causal reference, "sensible" was, given the metaphysical creed which once obtained, a genuine characterization of some qualities in distinction from others, namely, "intelligible" qualities. Nature was divided, cosmically, into kind of objects, or at least of objects with two kinds of properties. One set was permanent; the other was of nature in movement or change; one was of things as actualized, the other of things *qua* potential. Since the properties of natural change were actualized in animals, including man, through sense-organs, these qualities were fittingly called sensible. The "ible" clearly implies potentiality, requiring sense for their actualization into sense-forms or sensory essences. Intelligible forms, on the other hand, were actualized through the intellect. Thus the term "sensible qualities" had a characteristic and, given the premises, legitimate meaning. When modern physical science asserted the homogeneity of all things in the physical world and abandoned the category of potentiality and actuality for that of physical contact and motion ("efficient causality"), the term "sensible qualities" still continued in use. It was "rationalized" by interpreting it to mean qualities due to perception in distinction from qualities belonging to things themselves.[3]

Secondly, epistemological arguments which make qualities in whose generation sense-organs have a part to be of a different order from things, are pervasively infected with an ambiguity which consists in treating empirical things (trees, stones, stars, candle-flames,

[3] Locke, for example, does not use the expression "sense" or "sensory" qualities, but retains the older terminology, "sensible qualities," although repudiating the science and metaphysics which gave it significance. But it should also be noted that Locke uses "sensation" not to denote an existence, but an *operation* of mind. It is the act of mind which takes place when the mind perceives an idea upon occasion of changes in sense organs, themselves due to changes of objects which affect the sense organs. We get the idea of sensation, therefore, not from sensation, but, as in the case of all ideas of operations of the mind, from "reflection." See Book II of the *Essay*, Chaps. 9 and 19.

etc., all the things designated by ordinary common nouns) now as the causes of qualities, and now as correlated groups of the qualities. Thus we are told that a *tree* affects the *optic nerve*—(or the light reflected from a tree), giving rise to "sensations" of light and color; that a *stick*, partly in the *air* and partly in the *water*, through interaction with *sense-organs* and *brain*, occasions "sensations" which in turn give rise to a perception of a bent stick. Now it is clear that all the italicized words, whether naming things within or without the organism, designate empirical objects, not the objects of distinctively physical science. They are all, so to speak, in the same boat with colors and figures. The same is true, of course, when the finger pressing upon the eye-balls is said to cause the perception of double images, *etc., etc.* Now a moment's reflection shows that tree, stick, water, air, finger, and all such objects as figure in these arguments can not be opposed as real or as physical objects to sensations as mental. For these things, by the logic of the epistemologists, are themselves groups or combinations of "sensations," or of their equivalent mental "images." They are, in Locke's language, themselves complex modes, and can be distinguished from the sensation or sense quality only as the compound from the simple. They are of the same order, not of a different order. And if we do not use the language of epistemology, but of common sense, we are dealing with things and *their* qualities.

The thing which is to be distinguished from a quality as its cause is not tree, finger, water, *etc.*, but certain molecular disturbances. The latter are contrasted with the empirical thing, the finger, as well as with the immediate color quality. The bearing of this fact upon our present topic may be seen by taking the well-worn illustration of a penny seen now as a round flat disc, now as an ellipse with various degrees of distortion, and now, seen edgewise, as a curved line—or from a distance as a straight line. Unless there is a passage from one genus, from one universe of discourse, to another the facts must be stated in one or other of the two following ways: (1) Certain molecular disturbances in interaction with another set of molecular arrangements—empirically identified as the human organism—*cause* various phenomena of shape to appear. The round, flat form is no more the "real" (physical) object than are the ellipses and lines; the latter are not appearances of it, but they and it alike are "appearances" due to physical, or physical and physico-chemical changes. "Appearance" here has no other meaning than *effects*, effects used, as effects are everywhere used in scientific inquiry, to make inferences regarding their cause. In this case, the problems involved are similar to those found in any scientific inquiry where certain facts serve

as evidence from which to infer something else, externally of quite a different sort. Thus a form in a rock is used to tell of the presence and traits of an animal which lived in some by-gone age. It is thus an "appearance" of that animal: that is, it is an effect which gets its full meaning only when placed in connection with something else of which it serves as sign or evidence. (2) The other mode of statement is concerned simply with empirical relations between what is empirically perceived. The relations with which it deals are those of whole and part, or of a thing and its "belongings," not those of inference from what is perceived to some hypothetical or inferred cause. Thus an object which when placed in a certain position with reference to the body presents a flat, round form, when otherwise placed, presents an elliptical form, or that of a curved edge. Or, suppose we begin with a form which is that of a narrow curved band; we find that it can be placed in a serial order of other forms, some elliptical and some round and that a single formula can be found for the entire serial order, just as some numbers which first present themselves at random, or as a jumble, are finally arranged in a series having a principle of connection. There is no question of cause and effect, of "reality" and "appearance," even in the logical, non-epistemological sense, found in our previous case. There is simply and only a question of the correlation according to a constant formula of various qualities, the total correlated series constituting the object, say a penny. "It," the penny, has or is a series of phases, and physical conditions are such that the phases can not occur simultaneously but only serially—just as there is a series of phases by a determinable formula of gas, liquid, and solid. We may ask which most frequently occurs, and we may take, if we please, the frequency mode, for *practical* purposes, as the standard. But there is no sense in regarding one of them exclusively as the real and the others as its appearances. Every conceivable form or phase may, by the formula of the series, be taken as real in turn and the others as its appearances. But the facts denoted by this language are simply the existence of a series of a determined type.

There are thus two universes of discourse. In one we deal with the physical, existential relation of causal connection, as between colors, sounds, *etc.*, and their conditions, such as vibrations of a physical medium. In the other, we deal with the integrations of various perceptual objects into a whole. The problem is not one of causation, but neither is it one of the connection of a perceived object with an inferred object. It is like the problem of, say, getting the meaning of a sentence by integrating the meaning of words, or, *vice-versa*, of defining the meaning of a word otherwise unknown by considering

its contextual connections. A problem different from the problems of physical science and from those of ordinary empirical interpretation arises only if we mix and confuse terms taken from the two different universes of discourse.

Let "real object" be taken at one juncture in the discussion to signify the cause of certain qualitative and immediate effects, and at another juncture as the correlation of these effects into a single whole, and the confusion will generate the epistemological problem of perception as that is ordinarily stated. The confusion is increased by the ambiguities of the word "appear." Sometimes it signifies "be the effect of," as color is the effect of physical rays, or a fossil stone is the "appearance" of a once living animal; sometimes it signifies "be evident, apparent, immediately open to perception," as something before me in contrast with something in the next room, or the edge of a coin in contrast with the entire coin, or a particular rôle of an actor in contrast with the whole set of rôles which define the actor. Then the confused mixture of the two senses generates the idea of "appearance" as distinct from the "real," and hence the problem of the relation of the perceived object as, metaphysically, an appearance in contrast with the unperceived but real object.

In the third place, there is the persistent notion, taken over from Locke by psychological doctrine, that the first qualities perceived are simple and independent: that "red" is sensed before blood or a dress is perceived; blue before the sky, sweet before sugar, orange color and a peculiar odor before *an* orange, *etc.* This is pure superstition. Yet if it is surrendered, the whole current distinction between sensation and perception as modes of "consciousness" or of knowing objects disappears. The so-called "sensation" signifies simply a perception of a *discriminated* quality; the limit of perceptual discrimination by means of a given organ, Red, is not *a* sensation; it is a quality which we perceive, differing only from the perception of sunset in its relative simplicity and isolation, a difference which is not in any sense original and primitive, but which is the product of discerning analysis purposefully undertaken, as much so as the chemical determination of hydrogen as simple and different from water the compound. As a matter of fact (though facts have come to have little to do with discussion of these matters), a child recognizes its dresses long before it identifies colors; and it learns to distinguish colors as *marks,* that is as *means* of more effective discrimination between different dresses—or toys or other objects. When the homogeneity of perceptual qualities and objects is acknowledged and firmly held to, one important phase of the so-called epistemological problem of perception assumes the proper form of a familiar logical situation—the relation of implication, of sign, mark to that which signified.

Fourthly, the question of the spatial location of qualities perceived by means of the senses is one of physics and not of epistemology. The case of the whereabouts of illusory objects is usually cited as the final clincher to demonstrate the psychical character of the characteristic objects of sense-perception. Where is the ghost that isn't there? Where is the imaged tree which moves when the eye-ball is pushed? Where is the bent stick when the straight stick is plunged in water? It has even been suggested that mental or psychical may be defined as that which physical or public space refuses to accept and assign place to,[4] so conclusive is this type of question felt to be.

The source of this difficulty is failure to make a critical analysis of the conception of "where," of situs. Where, for example, is an explosion? Where is an echo? Where is the "magnetism" that causes a sensitized needle to assume a certain directional position? Wherever there is an event, there is interaction, and interaction entails the conception of a *field.* No "field" can be precisely delimited; it extends wherever the energies involved in the interaction operate and as far as any redistributions of energy are effected. The field can be limited *practically,* as can all matters of degree; it can not be existentially located with literal exactness. Thus the place of most *intense* disturbance in an earthquake may be located and, with sufficient variety of seismographic apparatus, the boundaries of its *appreciable* presence may be mapped out. But these boundaries are set practically by capacity to detect and record changes; they are not absolute in any existential sense. One might say that existentially the field of the earthquake is the entire universe since the redistribution of energies extends indefinitely. This would be correct, theoretically, though practically of no significance.

In similar fashion the bent rays of light in the case of the stick partly in air and partly in water are literally an interaction field determined by (presumably) electro-magnetic disturbances, physiological structures, and a refracting agency. It is not "in" the organism, nor is it "at" a highly delimited spot in the environment. The place where light rays impinge on the refracting thing with its different angles of refraction in two media of different density may form one focus in the field; the point where the refracted rays impinge on the molecular structures forming the optical apparatus may be another focus. But these, like foci of an ellipse, are determinations in a wider field. The sun—or other source of light—is a part of the "where" of the bent rays, just as much as some remote portions of the interior of the earth are a part of the "where" of an earthquake.

[4] *Essays in Critical Realism,* p. 61.

Specific location is always a relationship to a *further* event; it is additive in character. We "locate" an explosion *at* a given spot because the act of generating or preventing the explosion, the act of control of occurrence, is directed there. If we knew enough and had the power to occasion and to prevent earthquakes, we should undoubtedly say that an earthquake is *where* the act of control is applied. A disease involves the entire organism and (ultimately) some extra-organic interacting event, but its "seat" is where remedial measures most effectively take place. A man's body may be in Europe, since in certain respects he may be reached there most effectively, while his residence is in Florida and his domicile in New York. The demand to know "where" are the images of the tree that move when the eye-ball is pushed is an ambiguous question. Literally they are wherever a certain interacton of at least three factors is taking place. From the everyday practical standpoint, that of "common-sense," "where" signifies the point at which action should be directed to control the occurrence of the phenomenon.

The fact that "where" in ordinary usage contains a reference to an act, originating in an organic agent, is a commonplace. But unfortunately it is not usual to employ the commonplace in discussing questions of this sort. To "common-sense," a thing is located with respect to the locomotion or other movement of the organism which is required to attain or prevent certain results. That a thing is so many paces away in front, to the right and a little above, signifies that the human body must move so far ahead, swerve to one side and raise some part of itself in order to procure certain consequences. Every psychological book is full of instances of the fact that specific location is not inherent or intrinsic, but has reference to the actual or potential behavior of an organism in effecting a course of events. The location of the stick which is in the air is related to a certain habit of reaching and handling. This habit being adapted to a certain medium does not work correctly when the refraction of light occurs under unusual conditions. A wrong, an inefficient, unadapted act hence takes place. When the habit is re-made, specific location again takes place correctly. There does not appear to be any further mystery in the cases which are frequently employed to show that some objects of perception are mental in nature. Anyone who learns to use a microscope, or even a mirror, learns that specific location is a practical matter, not a literal existential one, and that unusual conditions of the coördination of acts of seeing and reaching occasion difficulty in locating until a new habit is set up. That certain images of light can not be located in space signifies, then, only that the practical act of reaching and grasping does not in their

case, without pains and practice, fit into the established systems of habits which customarily determine the seat, residence, or situs of an affair, the latter being physically and literally a complex interaction, covering a vast field. Indeed, the field is so vast and illimitable that, strictly speaking, the interaction may be said to be "of" nature rather than "in" it, in the practical sense in which we quite properly use the terms "in" and "at." The theory criticized is thus also guilty of the third of the misconceptions we have mentioned. It passes surreptitiously from ordinary perceived spatial relations of perceived things to "physical" space in the sense of space as the object of physical science. If we stick strictly to physical terms, there is no peculiar problem, but only the ordinary scientific problem of determining a field. If we stick to empirical perceptual terms, there is only the problem of correct practical adjustments in reaching, grasping, handling, *etc.*

I do not suppose that the four misconceptions which have been considered exhaust the list of antecedent confusions and mistakes which bring about the conversion of a naturalistic view into an epistemological one. But they are important contributing factors. Until these preliminary ambiguities and shiftings have been got rid of, there seems to be little hope that continued discussion of the problem of perception which proceeds without any reference to them will bring us nearer to agreement and settlement. When they are disposed of, as far as there remain anything more than scientific questions of a familiar type, the residual problems concern metaphysical matters, such as import of the causal relationship and the nature and status of qualities.

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BOOK REVIEWS

Prolegomena to an Idealist Theory of Knowledge. NORMAN KEMP SMITH. London: MacMillan & Co., Ltd. 1924. Pp. xiii + 240.

This a substantial contribution to the theory of knowledge. But perhaps the reader ought to be warned that he will not find in the book quite what its title has probably suggested. The words "idealist theory of knowledege" usually refer to a view in which the object of knowledge is in some way bound up with the knowing. Such a view is far from the author's mind. If words are to bear their ordinary meaning, his theory of knowledge must be described as a fairly thoroughgoing realism. But though he places color, sound, and the other sensa "among Nature's constituents" and

considers them " integral to the physical system," nevertheless he does not admit that in this view he is abandoning idealism's " central contention." For that contention he takes to be this, " that spiritual values can be credited as operating on a more than planetary, that is, on a *cosmic* scale." Thus the chief issue between idealism and its opponents is not, in Professor Smith's opinion, whether objects are mind-dependent; it is rather the conflict " between a religious and a secularist view of life." But since the argument for idealism as he defines it is reserved for a later volume, the present book is most truly regarded as stating a new variety of realist theory of knowledge.

What precisely this new variety is, it is hard in a few words to say. But since the author, following the philosopher of whom he has recently made so valuable a study, regards the three fundamental processes of knowledge as those by which we grasp (*a*) the sensa, (*b*) space and time, (*c*) the categories, his view may perhaps best be indicated by stating his positions on each of these in order.

(*a*) In explaining the status of the sensa, three possibilities, says Professor Smith, are open to us. We may take them as subjective, as was done by Descartes and Berkeley; we may regard them as characteristics of independent objects, after the manner of the new realists, or we may take them as events, in the fashion of Dr. Whitehead.

Among philosophers it is the first alternative that has been most popular, and the author devotes about a third of his book to its examination and rejection. Subjective idealism has its source exclusively, he thinks, in the view that " sensations are mechanically generated through brain-processes." But if this view is held, the idealism that is based on it is clearly contradictory, since the body is held at once to be a mass of sensations and also the condition of their existence. On the other hand, if this view is disavowed and, in the wholesale manner of Berkeley, it is held that there is nothing at all objective about the sensa, then subjectivism has become meaningless, for the point of the distinction is gone. Professor Smith would not abandon this distinction between the subjective and the objective, but the true bifurcation, he thinks, is not into primary qualities and secondary; it is rather that which has been made by Moore and Whitehead into awareness on the one side and all the objects of awareness on the other.

But if it is unsatisfactory to regard the sensa as subjective, it is equally so, the author thinks, to take them as belonging, just as perceived, to external objects. For if this latter theory is true, then, for example, the quite different colors seen by the color-blind

and the normal man somehow belong to the same spot at once; and how this can be, the new realism has not as yet satisfactorily explained.

Hence the third view seems the most promising, the view that the sensa are events. But what exactly the author means by this view it is rather difficult to see. On the one hand, it is made clear that the sensa are products of physiological processes and thus are objective events in nature as truly as breathing or digestion. On the other hand, it is held that they are private to one individual. Thus they are at once private and objective. And this naturally raises the question what the author means by objective. It is evidently not "public," since he has expressly maintained, as against the new realists, that the sensa, although objective, are *not* public; they are private to each observer. Hence he presumably means "independent." Now it is hard enough to think that the tastes and odors and sounds of my private experience can also exist independently. But the case is made specially difficult by Professor Smith's express admission that some of the sensa are psychically conditioned, because bound up with the element of meaning. How can a sensum be an objective event, in the sense of independent of perception when it is admittedly conditioned by psychical factors?

(*b*) Intuition, the author thinks, is a process distinct from sensing and quite different in its objects. We sense colors, sounds, tastes, *etc;* we intuit space and time. And space and time are not, like the sensa, events that are open to private view only; they are in both cases public structures. In order to support this view, Professor Smith examines in detail what he regards as the chief alternative, the theory developed with minor differences by Ward and Stout, that our mature perception of space grows out of the *sensation* of extensity. Our perception of space, he contends, has nothing sensory in its nature. We use from the very beginning that category of spatial unity which Stout is willing to concede only to developed perceptions of space; from the very dawn of experience the field of presentation is so continuous, and the intuition is so clear of its extension beyond what is given, that we must regard the apprehension of space as belonging to a different faculty from that which grasps the sensa. Space and time, it is often repeated, are apprehended *in terms of* sensa, but not *through* sensa. That is, if it were not for sense experience, intuition would not come into play; but that is no semblance of proof that intuiting and sensing are the same.

The great and evident difficulty here is to see how the various sensa should have come to appear spread out, and as existing them-

selves in space, when they are not really there at all. This is, of course, what Professor Smith is bound to maintain. When we look at " the blue expanse of heaven," the expanse, he would say, is intuited, and the blue, on the other hand, sensed; they are two objects of different faculties; the expanse is not really blue, and the blue is not extended. He realizes to the full how paradoxical this appears, and "I may at once admit," he says frankly, "that I can not in any fully satisfactory manner profess to explain " how this result has come about. Still he produces some interesting evidence from the researches of Dr. Head, which suggest that the physiological centres for the apprehension of space and for the apprehension of sensa are quite distinct. " Since," however, " the general sensitiveness of the skin precedes the development of the senses of sight and hearing, the connection between sensa and extensity will presumably begin on the thermal and tactual levels," and this connection being so ancient, we have never been able to obliterate it from our experience. The apparent spatiality of the sensa are thus the result of inveterate association.

(*c*) We have seen that according to Professor Smith the sensa on the one hand and the forms of space and time on the other are different types of existence and must be differently apprehended. Are we to say the same of the categories?

He answers, Yes. The subjectivist view of the categories, which would reduce them to mere habits of mind, he thinks has been once for all refuted through the difficulties found by Hume. There is no way, on such a basis, to account for our apprehension of things as permanent or as governed by causation. Hence the categories are objective, like the sensa and space and time; they are non-sensible forms of existence involved in everything knowable. And like the others they require a distinct kind of apprehension, in this case the activity of thought. Professor Smith distinguishes two fundamental categories, whole-and-part and necessitation (which he defines as " the concept common to logical ground and causal connection "). These forms have no sensory origin, but are presupposed in all experience. Indeed, every case of knowledge involves the joint activity of all three kinds of knowing. When I perceive a falling star, I sense the point of light and intuit the space and period of its fall. At the same time I think these quantities as part of a larger whole and the fall itself as being the outgrowth of the past. Thus knowledge, for Professor Smith, means the conjoint activity of three kinds of apprehension, all subtly and inseparably united, whose objects, though alike in their independence of being known, are all distinct types of existence.

There are grave difficulties, as we have seen, both in his view of the nature of sensing and of how this blends with intuition. Nevertheless, the book on the whole is a most commendable and hopeful enterprise. It represents an attempt which must certainly become more common if idealism is to hold its old primacy in the face of numerous philosophical insurgents. For in the first place it takes science seriously and, with obvious understanding, lays under contribution those writers of the newer schools who are most markedly sympathetic with science, like Whitehead, Alexander, and Broad. In the second place it attempts what Miss Sinclair has so emphatically said is the only hope of idealism, namely "to deal seriously with space and time." And though one feels that the style has not been rendered lighter by the author's extended studies in German classics, he has managed to introduce both compression and lucidity into the review of an extremely complex field.

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Immanuel Kant. 1724–1924. Addresses given at Jacob Sleeper Hall, Boston, on the Two-Hundredth Anniversary of Kant's Birth. GEORGE HERBERT PALMER, MARY W. CALKINS, E. C. WILM, W. E. HOCKING, HARLOW SHAPELY, KUNO FRANCKE, ROSCOE POUND, and GERHART VON SCHULTZE-GAEVERNITZ. Edited by E. C. Wilm. New Haven: Yale University Press. 1925. Pp. 88.

Immanuel Kant. 1724–1924. Papers read at Northwestern University on the Bicentenary of Kant's Birth. E. L. SCHAUB, G. T. W. PATRICK, MARTIN SCHÜTZE, J. A. LEIGHTON, EDWARD SCRIBNER AMES, S. G. MARTIN, J. H. FARLEY, E. L. HINMAN, J. F. CRAWFORD, E. F. CARRITT, and FRANK THILLY. Edited by Edward L. Schaub. Chicago: The Open Court Publishing Company. 1925. Pp. 211.

These two sets of commemorative addresses in honor of the two-hundredth anniversary of Kant's birth, now appearing, substantially in the form in which they were delivered, and in volumes bearing identical titles, present material of varied interest. The main purpose of each series is the same: that, namely, of presenting for the information of an audience not altogether professional or technical a brief but stimulating introduction to the various phases of Kant's thought, together with some estimate of its historical significance and present value. This purpose seems in both collections to be well fulfilled, although the Boston series, in view of the limitation of each speaker to a ten-minute period, is inevitably slighter. The interest

of the Northwestern volume is notably enhanced by the inclusion of a number of appropriate illustrations.

The life and character of Kant are briefly sketched by Professor Palmer in the graceful "Opening Words" of the Boston collection: while in the Northwestern series the cultural environment, economic, social, political, literary, and philosophical, in which Kant's philosophy took its rise, and upon which in its turn reacted, is described by Professor Schütze; and the manifold influence which Kant's thought has never ceased to exert, and the sources of its continued power are ably analyzed by Professor Schaub.

The central doctrines of the *Critique of Pure Reason* are clearly expounded, albeit with somewhat divergent interpretations, in two of the Northwestern lectures, by Professor Thilly and Professor Leighton, respectively, and are very briefly and somewhat tartly commented upon in one of the Boston addresses by Professor Calkins. The text of the *Critique* embodies notorious inconsistencies, and he would be indeed a bold critic who should assert that the discrepancies of the two accounts of the Northwestern collection can not be fully justified by reference to the words of Kant himself; but if the analysis of Professor Kemp Smith's great *Commentary* is to be relied upon, Professor Leighton's interpretation would seem to be more faithful to the deeper and more mature aspects of Kant's thought than would that of Professor Thilly. Thus, for example, throughout the body of Professor Thilly's essay he speaks as if the activity which categorizes the world of experience were to be thought of as belonging primarily to the mind of the individual knower. (*Cf., e.g.*, p. 204: "Our world of experience . . . is a rational experience because we ourselves have rationalized it." Or, p. 203: "What we call our experience is something dependent on our own minds.") All that side of Kant's teaching which is summed up in his doctrine of the transcendental unity of apperception scarcely comes into view, until at the very close we hear somewhat obscurely of "the *Geist* which Kant left hanging in the heavens . . . the principle which reveals itself in human thinking" (p. 211). This rather misleading one-sidedness is, however, corrected by Professor Leighton, who more than once expressly emphasizes the point that " the synthetic processes, which condition all experience, are *not* acts of the empirical subject. They are the expressions of the noumenal activity of a universal thinking principle" (p. 78; *cf.*, also pp. 73, 74). But neither writer hints at the important fact, brought out by Professor Kemp Smith, that in the most mature development of his views Kant's thought was moving towards the conclusion that we have no right, strictly speaking, to regard these synthetic categorizing proc-

esses as processes of thinking or of consciousness at all, nor even as activities of a mind. Again, Professor Thilly, in spite of his recognition of Kant's teaching that "We can not look for God and the soul in nature: they are not objects of experience among other objects, phenomena in the space, time, causal order" (p. 204), nevertheless constantly represents Kant as holding simply that *a priori* knowledge is derived from the mind's knowledge of its own nature and modes of activity: "Knowing the nature of the mind, the universal and necessary *a priori* forms of the mind, we can know its products, the world of our experience" (p. 204). Professor Calkins, too, finds "of crowning importance" "Kant's doctrine that essential to knowledge is the knower and that implicit in our knowledge of the object is our experience of this knower" (p. 19)—an experience which in her view is bound up with "the experienced fact of relating" (p. 21). But she makes quite clear, even in deploring, the fact that in the end Kant abandoned this "old secure position." Professor Patrick thus better represents the more fully developed Kantian view in his insistence that for Kant "Consciousness . . . is awareness of meanings, but never awareness of awareness. . . . The individual self is conscious only in so far as it is a consciousness of objects" (p. 80). In fact, according to this phase of Kant's thought, it is not from a knowledge of its own nature and modes of activity that the mind proceeds to infer the necessary structure of experience. It is rather from the analysis of experience itself that we are led to infer the necessity of synthetic processes which it presupposes, but which we do not consciously find ourselves importing into it. Finally, Professor Thilly takes the opposition of phenomena and noumena in a different sense from that in which it is taken by Professor Leighton. Professor Thilly's interpretation will be clear from the following passage: "Complete though such a system of knowledge (*i.e.*, of the experienced-phenomenal world) would be, it would tell us nothing whatever of the real world, of things as they really are in themselves, for the perceiving mind can not pierce the veil of experience and penetrate to the world which is behind that" (pp. 207–208). Professor Leighton again follows the more mature Kant: "The final distinction, in the Critical philosophy, between *appearance* and *reality* is not a contrast between experience and that which can not be experienced" (p. 79). "Kant finally developed a position in which the relation of phenomena to noumena is that of the Partial and Conditioned to the Unconditioned and Systematic Totality of the Real" (p. 76). "Then phenomenal knowledge, partial though it must always be, is continuous with the totality of the Real" (p. 74). In Professor Thilly's account, in a word, Kant's position approxi-

mates throughout more nearly to subjective idealism; in Professor Leighton's more nearly to objective idealism.

Kant's ethical system is the subject of an elementary sketch by Professor Wilm, and suggests to Professor Patrick a plea for an "imperativistic ethics." This resolves itself largely into a rather querulous protest, somewhat in the style of Mr. P. E. More and Professor Irving Babbitt, against the dangerous tendencies of "our modern individualistic centrifugal society," "this centrifugal and expansive age, restive of any restraint or control, revealing an almost pathological desire for freedom, and for the full and abundant life" (p. 32). In this situation "there is need for the 'inner check,' the motive of restraint and reserve, the discipline of the wise man who looks beyond the present. . . . Some authority there must be, commanding our loyalty and respect, acting as an integrating force in an age threatened with social disintegration" (pp. 32–33). But "Whence will come that voice of authority, that autonomous will, which is going to make all these people behave themselves?" (p. 32). Professor Patrick seems somehow to find the solution in the hope that if men can only be brought to recognize, in the spirit of the Kantian ethics, that "moral values are subsistent entities" (p. 39), and that "the universe is moral," the right "will speak with the voice of authority," the goodness and righteousness will be "like powerful magnets drawing all things to themselves" (p. 39). Professor Patrick moves under the aegis of Kant, but the connection seems often of the slightest. It is difficult to follow Professor Patrick when he appears to recognize Kant's categorical imperative in the commands of military authorities (p. 31), in the orders of a football coach, the rules of a college fraternity or of a boy's gang, and in the dictates of fashion (p. 34); and to identify Kant's autonomous will with any prepotent authority—"an angry God with his ten commandments," or some "leader who will draw all men unto himself," "some mighty magnet drawing and commanding the respect and obedience of men" (p. 35).

Kant's philosophy of religion is judiciously expounded by Professor Hocking, is related to contemporary discussion by Professor Ames, and affords occasion to Professor Farley for an enthusiastic rhapsody on the themes of absolute idealism. We are introduced to "a fundamental distinction between what we may call 'great' and what we may call 'cramped' religions" (p. 118). It appears that "great" religions are those which accept the monistic presuppositions of absolutism, and that "cramped" religions are, quite simply, all other religions. Kant's philosophy of religion is elaborately compared with that of Dr. Bosanquet. Needless to say, Kant fares but ill.

The estimates of Kant as a student of natural science are particularly interesting. Professor Martin points out (Northwestern volume, p. 103) that Helmholtz had a very high opinion of Kant's potentialities as a natural scientist; and although Adickes says of him that "he remained all his life long a dilettante in natural-scientific matters, indeed an extremely well-informed and mathematically trained dilettante, but when all is said a mere dilettante" (*cf.*, the Northwestern volume, p. 196, note), it is the judgment of Mr. Shapley (Boston series, pp. 61–62) that "Kant was in aptitude and method a natural scientist of the highest order. He could undoubtedly have been in the direct line of cosmic immortals—Copernicus, Kepler, and Newton." It appears that among Kant's other notable suggestions, and in addition to his formulation, prior to Laplace, of the nebular hypothesis, he was the first to deduce from Newtonian principles the important consequence that tidal friction must be slowing down the rotation of the earth—a theory which is still accepted today.

Kant's philosophy of art is discussed in one of the most stimulating of the Northwestern series by Professor Carritt, and again, in the Boston series, by Professor Francke. Professor Pound's fascinating but all too brief account of Kant's philosophy of law and its influence may be supplemented by Professor Hinman's treatment of the same topic. The latter is careful to hearten us by the assurance that Kant's philosophy of property "gives no footing whatever for Bolshevism" (Northwestern series, p. 151). Both volumes also contain interesting accounts of Kant's doctrine concerning perpetual peace, and each of the writers notes that Kant's teachings on this matter, far from being merely incidental, form an integral part of his philosophy—a part which indeed serves to crown the whole.

There are a number of typographical errors in the Open Court volume. I have noted the following: on p. 62,—3, a *not* has clearly fallen out before *altogether unlikely;* in the Latin quotation under the illustration facing page 93 the word *extra* should be added after *quæsiveris;* on p. 122 line 19 should follow the present line 21; on p. 147 in line 4, for *point* read *points;* and on p. 187 in line 34 for *in* read *its.*

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JOURNALS AND NEW BOOKS

SCANDINAVIAN SCIENTIFIC REVIEW. Vol. III, Nos. 3 and 4. Sydney Alrutz, in Memoriam: *Bertil Hammer.* Despotism amongst Birds: *Thorlif Schjelderup-Ebbe.* The Law of Moral Antithesis be-

tween Feeling and Idea: *Herman H. Aall.* The Direct Principle in the Teaching of Modern Languages: *Gabriel Loftfield.* The Present Status of Psychological Science in Different Countries: VII—Belgium: *Aug. Ley;* VIII—Czechoslovakia: *F. Seracky* and *J. Kozak;* IX—The United States of America: *W. P. Pillsbury;* X—Canada: *G. S. Brett.*

Die Akademie. Heft 4. (1925). Helena in Goethe's Faust: *Heinrich Rickert.* Vom Wesen des Stils II: *Hermann Noack.* Die Hypothese der Kausalität: *Kurt Riezler.* Über idealistische Politik als Wissenschaft: *Heinrich Rickert.* Das Maschinenideal in Philosophie und Kultur: *Paul Feldkeller.*

Revista de Filosofía. Año XI, no. 4. Sentido filosófico de la Teoría de la Relatividad: *J. Nicolai.* Un nuevo libro de Nicolai: *G. Bermann.* América Latina y la actualidad mundial: *A. O. Quintan.* La filosofía de la naturaleza según Kant: *C. Jacob.* El Budismo en América: *V. Mercante.* Las trayectorias del pensamiento estético: *G. Escudero.* Las generaciones históricas: *R. A. Orgaz.* La teoría cerebral de las emociones: *A. Palcos.* La Pedagogía Universitaria de Francisco Giner: *H. Cáceres.* Psicología de la metáfora: *A. Ponce.*

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NOTES AND NEWS

Sixth International Congress of Philosophy

(First circular)

In accordance with the Preliminary Announcement of August, 1924, the Sixth International Congress of Philosophy will meet September, 1926, in the United States, under the auspices of the American Philosophical Association.

The date of the Congress will be September 13–17, 1926. The place will be Harvard University, Cambridge, Massachusetts. The President of Harvard and the Department of Philosophy extend to the Congress a hearty welcome. In particular, they are making

convenient arrangements for the entertainment of Delegates and Members. Rooms will be provided for official Delegates free of charge. Meals for Delegates, rooms and meals for Members, will be furnished at minimum rates.

The recognized languages will be English, French, German, Italian, and Spanish.

The sessions of the Congress will be arranged under four divisions: *A.* Metaphysics (including the philosophy of nature, philosophy of mind, and philosophy of religion); *B.* Theory of Knowledge, Logic, and Scientific Method; *C.* Theory of Values (including ethics, social philosophy, philosophy of the state, philosophy of law, philosophy of education, and æsthetics); *D.* History of Philosophy. Under each of these divisions one General Session will be held with papers by specially invited speakers, whose names and subjects will be announced later. Sectional Meetings in part on subjects determined in advance, will also be held under each division. The time allotted for sectional papers will be limited to twenty minutes each. Members offering papers are requested to forward, with the titles of their papers, brief typewritten summaries for submission to the Committee on the Programme. They are further requested to note that, to the regret of the Committee, it will be impossible to accept papers unless they are to be presented by their authors in person.

Membership in the Congress will include Active Members and Associate Members. Active Members will be entitled to all the privileges of the Congress, including a copy of the *Proceedings.* The fee for Active Members will be five dollars. The fee for Associate Members (families of Active Members and other qualified persons) will be two dollars and a half; but they will not be entitled to vote, to special privileges of entertainment, nor to the *Proceedings.*

Adhesions, Membership fees, and Papers for the Sectional Sessions may be sent to Professor John J. Coss, Corresponding Secretary, 531 West 116 Street, New York City.

Later circulars will contain the detailed plans for the Congress as they are developed and matured. Meanwhile, we commend it to the interest of our Colleagues in all lands; as, in behalf of the American Philosophical Association, we have the honor to invite them to join in continuing the series of International Congresses, inaugurated at Paris in 1900 for the advancement of philosophy and the promotion of intercourse among philosophical scholars.

(*Signed*)

For the Organizing Committee

NICHOLAS MURRAY BUTLER, *Chairman,*

A. C. ARMSTRONG, *Honorary Secretary.*